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ABSTRACT

Work attitudes and values taught by secondary trade and industrial instructors were identified through interviews with a sample of 50 trade and industrial instructors from 11 educational regions across Virginia. The study also assessed the attitudes and values as to whether they contributed to producing a compliant labor force or a critically thinking one and explored whether work values and attitudes were taught primarily through critical democratic or indoctrinational pedagogical strategies. In semistructured interviews, respondents identified work values and attitudes they taught to students, named a pedagogical technique they used to teach each work value or attitude, and described one event in which they believed they were effective in teaching work values and attitudes. Results indicated that successful secondary trade and industrial instructors taught work values and attitudes recognized in the vocational education literature and by employers as being most important. Findings did not support the contention that vocational educators use primarily indoctrinational strategies to teach work values and attitudes. Although reward structure and role modeling were used extensively, more democratic strategies, such as group discussion, one-on-one counseling, and role playing, were also frequently used. However, these more democratic teaching strategies were not necessarily emancipatory. (Appendixes include a list of 42 references and 2 data tables.) (YLB)

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Secondary Trade and Industrial Education Work Values Instruction: Emancipatory or Indoctrinational?

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Introduction and Conceptual Framework

The mid nineteenth century heroes of Horatio Alger's successful novels were poverty stricken boys, who through fortuitous circumstances and a strong work ethic, overcame their deprivations and became wealthy. Ragged Rick, among others, would appear to be the consummate employee according to today's business leaders. The lesson of Alger's novels was that appropriate work values and attitudes could lead to individual financial gain as well as company success. Management today would lament that employees, such as those found in Alger's novels, are rare.

In fact, employers discharge, or fail to promote, most employees because of behaviors reflecting an inadequate work value or attitude rather than because of a deficiency in job skills or technical knowledge (Bowen, 1987; Pascarella, 1984; Petty, Kazanas, & Eastman, 1981; Schartz & Neikirk, 1983). Although there seems to be much support among vocational teachers and researchers for the inclusion of affective work skills in the vocational curriculum, there are strong disagreements concerning how they should be taught (Miller, Rubin, & Glassford, 1987). Such

arguments have existed in vocational education since its origins and are not easily resolved (Wirth, 1980).

John Dewey (1916) argued that education should use a critical democratic approach to raise student consciousness about values, attitudes, and worker responsibilities. He stated that the primary purpose of education in the United States was to foster the growth of democratically minded citizens, and Dewey made no distinction in the education of those who would manage the companies and those who worked on the shop floors. Dewey strongly advocated vocational exploration as a means to acquire practical knowledge, apply academic content, and examine occupational and societal values. However, he adamantly opposed the use of vocational education as merely trade education because it would overemphasize technical efficiency. If this occurred, and some would argue it has, Dewey warned "education would then become an instrument of perpetuating unchanged the existing industrial order of society, instead of operating as a means of its transformation" (p. 316). Dewey believed that it was education's role to combat social predestination, not contribute to it.

In contrast, Charles Prosser and David Snedden advocated an indoctrinational approach for teaching work values and attitudes; students should learn, without question, the ethical standards of dominant society and the professional ethics of the desired occupational area (Prosser, 1939). Supporters of this approach believed the primary purpose of public education was the development of human capital for the success of the industrial economy. To accomplish this, argued that scientific management

principles, drawn from the industrial sector, were employed in the public school setting, creating a hierarchically structured and production oriented educational system (Spring,1990). Prosser's sixteen theorems on vocational education support this vision of schooling (see Prosser & Quigley, 1950, p. 215-242). According to Prosser (1950), vocational education should replicate the occupational environment (i. e. , processes, machinery, tools), emphasize efficiency (e. g. , outputs, costs) and teach "functioning facts rather than in the mere acquiring of abstract and socially useless knowledge" (p. 91).

In the past 15 years the argument initiated by Dewey and Prosser and Snedden has resurfaced between educational theorists, outside the realm of vocational education, and business leaders concerned about the decline of American industrial productivity. Expanding upon Dewey's perspective, these educational theorists have used a socio-political-economic framework to guide their critique. Specifically, reproduction theorists have criticized vocational education for transmitting work values and attitudes necessary for a compliant work force as well as primarily employing indoctrinational pedagogies for work values and attitudes instruction (Bowles & Gintis, 1976). Reproduction and critical theorists have argued that the indoctrinational approach is exploitative because it produces attitudes in students that correspond to the type of work in which students will most likely participate upon completion of their formal education (Anyon,1980; Bowles & Gintis, 1976; Giroux, 1983; MacLeod, 1987).

In contrast to the comments of critical theorists and following the perspective of Prosser and Snedden are national reports, advisory committees, and interviews, in which business leaders have repeatedly emphasized the need for vocational educators to teach desirable work attitudes and values (Cherrington, 1980; Miller, 1985). An example of this sentiment is a statement made by the manager of plant training programs for Westinghouse Electric Corporation, Robert Watson (1982), who said in an article to vocational educators that ". . . I believe you must develop a program of employment skills that will address the old problem of attitude-behavior, being on time, cleaning up, general work habits" (p. 35).

Another facet of this contemporary debate was represented in the recent report, America's Choice: high skills or low wages! which focused on corporate organizational structure and its relationship to worker behaviors (National Center on Eduction and the Economy's Commission on the Skills of the American Workforce, 1990). It stated that about 80% of United States companies utilize a pyramidal mass manufacture model that values reliable and compliant workers who perform their tasks almost "robot-like." This is in contrast to democratically structured organizations that need workers who are adaptable, resourceful, critical, and capable of making decisions. While Dewey (1916) and critical theorists are concerned primarily with implementing democracy in the schools and the workplace to create a more just and equitable society, the industrial sociological literature has provided evidence that work organizations that employ democratic processes or participatory

management also increase worker productivity (Hall, 1987; Jain, 1980; Zuboff, 1983). The Commission suggested that, while there is a trend toward companies implementing more participatory management, vocational education needs to teach democratic skills and utilize primarily democratic strategies so that future workers will be prepared to participate in, and assist in transforming companies into, high performance work organizations.

Statement of the Problem

While the literature contains many studies which identify work values and attitudes essential for successful employment, it is inconsistent about which work values and attitudes are taught in vocational programs and the pedagogical strategies teachers employ to teach them. Nelson and Nies (1978) argued that vocational instructors use primarily democratic pedagogical strategies. In contrast, Bowles and Gintis (1976), and Hurn (1987) have suggested that vocational education instructors use primarily indoctrinational pedagogical strategies.

Therefore, the primary objectives of this study were to identify work attitudes and values that secondary trade and industrial instructors teach and to assess the attitudes and values as to whether they contribute to producing a compliant labor force or a critically thinking one. Another objective of this study was to explore whether work values and attitudes are taught primarily through critical democratic or indoctrinational pedagogical strategies. More specifically, the research questions associated with this study were:

1. To what extent do secondary trade and industrial instructors teach work values and attitudes more appropriate for a pyramidal manufacturing organization as compared to a democratically structured organization?
2. To what extent are pedagogical techniques that secondary trade and industrial instructors use to teach work values and attitudes democratic or indoctrinational?

Methodology

Subjects

The sample consisted of 50 secondary trade and industrial instructors from 11 different educational regions across Virginia. The instructors were nominated by their respective area center directors as being effective instructors of work values and attitudes. There were 41 male instructors and nine female instructors who were all cosmetology instructors. The mean age of the instructors was 47.5 years. The mean number of years teaching experience was 14.28, and the mean for occupational experience was 14.38. Most of the instructors had completed some college studies.

Instrumentation

A semistructured interview schedule was developed to obtain data. Respondents were asked to identify the work values and attitudes they teach to their students, and to provide an example of a pedagogical technique they use to teach each work value or attitude. Respondents were also asked to describe one event in

which they believe they were effective in teaching work values and attitudes to a student, a group of students, or an entire class.

The Behavioral Event Interview (BEI) was developed by McClelland (1978) and colleagues at McBer and Company. It is based on the Critical Incident Technique that was created by Flanagan (1954). Though BEI respondents may initially only discuss behaviors they believe are critical, additional probing can reveal all relevant behaviors that occurred in the situation or event. Klemp (1979) maintained that through the use of extensive probing, the interviewer can learn about behaviors that were actually performed in the event, rather than biased recollections of behaviors. Boyatzis (1982) encouraged the use of the BEI in face-to-face situations because it is easier to obtain more contextual information.

Procedures and Data Collection

All of the interviews were conducted face-to-face at the school location except for one. Interviews lasted from 25 to 90 minutes, and all were tape recorded.

Coding Schemes

The work values and attitudes that instructors listed were first categorized through the use of the Affective Work Competencies Inventory (AWCI) for management purposes (Kazanas, 1978). The AWCI is an inventory of 95 indicators that describes 15 different affective work competency clusters. However, because of instructors' responses, it was necessary to add a category for

citizenship.

Insert Table 1 about here

After the instructors' responses were coded, the values and attitudes were identified as either more appropriate for a pyramidal manufacturing organization or for a democratically structured organization. Theoretical frameworks were utilized from the industrial sociology literature (Hall, 1987; Jain, 1980; Mason, 1982).

The pedagogical techniques employed by the instructors to teach work values and attitudes were coded based upon a review of the literature of critical democratic pedagogy (Freire, 1985; Giroux, 1988a;1988b; Shor, 1980; Shor & Freire, 1987; Simon, Dippo, & Schenke, 1991; Weiler, 1988). The goal of critical pedagogy is to empower both students and teachers to create a more just and equitable democratic society. Within a classroom, teachers who employ critical pedagogy select content relevant to the students and encourage them to intellectually transcend their world view by analyzing the social forces at work in their lives. The literature in critical theory warns against a cook book approach to critical pedagogy. Because of this admonition, we analyzed the content of the lesson, the instructional techniques used as well as the intent of the teacher (if it could be surmised) to determine whether the pedagogy being used was critical and emancipatory or indoctrinational.

Results

Work Values and Attitudes Secondary Trade and Industrial Instructors Teach

In general, obedience, punctuality, compliance, and deference to authority were emphasized to students more than resourcefulness, adaptability, and problem solving. This was surmised not only by the frequency of specific affective clusters selected by the instructors, but also through analysis of the behavioral event interviews in which the instructors provided rationales for their emphasis of certain work values and attitudes. Table 1 illustrates that the Dependable/Punctual/Reliable /Responsible cluster was the most emphasized by instructors while the Adaptable/Resourceful cluster, which includes a focus on problem solving, was emphasized least.

Several themes or rationales emerged from the data for the emphasis on Dependable/Punctual/Reliable/Responsible. One rationale, consistently expressed by the instructors, was the belief that the lack of these values would result in employee termination. The instructors suggested that while critical thinking, problem solving, adaptability, and resourcefulness might be valued in some work places, punctuality and dependability are critical behaviors for an employee to possess in all work places. To support their assertion, instructors frequently related incidents in which employers had told them to convey the importance of attendance and punctuality to students. An electronics instructor even had a letter posted on his bulletin board from an industrial manager that stated

his company would not consider hiring vocational education graduates who had as many as five unexcused absences during their senior year. No similar incidents were related by the instructors that focused on the Adaptable/Resourcefulness cluster.

Another rationale that was consistently expressed by the instructors for emphasizing the Dependable/Punctual/Reliable/ Responsible cluster was the perception that so many of their students seemed to lack these affective work competencies. As one automotive mechanics instructor stated:

> "A lot of my students are counseled into this program because they are at-risk. They normally already have a history of absenteeism, tardiness, and of not completing assignments. As a result, I have to convince the students that there are rewards, both immediate and delayed, for them to be present, punctual, and to work diligently on assigned tasks. "

The above quote is not only representative of the comments made from other respondents, but it also demonstrates the belief held by most of the instructors that students must be present and on time in order for them to learn other values such as resourcefulness and adaptability. This perspective surfaced several times.

So far, this discussion has supported the contention of reproductionist and critical theorists that vocational education serves the interests of a pyramidal mass organizational work structure. However, other findings of this study do not entirely support such a conclusion. For instance, when Cooperative/Helpful surfaced in an event, the instructors referred to interaction among students as opposed to interaction between instructors and

students. Instructors saw being cooperative as a great deal more than the absence of disruptive behavior. Furthermore, when instructors talked about teaching the Cooperative/Helpful cluster, they referred to team work and team building extensively. In addition, the Independence/Initiative cluster was emphasized slightly more than the Follow Directions/Responsive cluster.

Another theme that emerged in contrast to Bowles and Gintis' (1976) assertion but in support of current critical theorists (McLeod, 1989; Giroux, 1983), was that numerous students displayed anything but "robot-like" behavior. The respondents described students who resisted their instruction even though mastery of the content would help them acquire better than low pay low skill jobs for which many of the students were destined. One theme that emerged from this study was an ironic one: Some students resisted the program's potential to help them escape from exploitative jobs. This theme was voiced most frequently by instructors in Northern Virginia because of the availability of good paying jobs in certain occupational areas for those students who demonstrated ambition and competency in certain skills. While ambitious was reported as being frequently taught by most of the instructors (see Table 1), this geographical group of instructors expressed the most frustration in teaching it because of the energy they expended toward convincing students to take advantage of the available opportunities.

The affective competency cluster, Adaptable/Resourceful, surfaced the least number of times, and the few events in which it

surfaced were provided by electronics and automotive mechanics instructors. One auto mechanics instructor explained:

> "We do a great deal of live work in this program. We work on school employees' cars, students' cars, and even the public's cars. The majority of these cars are brought to us because they have a problem. My role as a teacher dictates that I teach the students how to solve problems, but that I don't solve the problems for them."

An electronics instructor voiced a similar philosophy.

> "The second year students in this program do a great deal of lab work. A major part of lab work consists of repairing electronic items. Instead of telling the students what they should do to repair these items, I ask the students questions to guide them. By doing this, I let the students solve the problems."

This study found that most trade and industrial instructors emphasize those work values and attitudes considered most important by employers (i. e. , advisory committee members) in their respective field. The above quotes demonstrate that the problem-solving nature of electronics and automotive mechanics may have dictated the teaching of this attitude. Similarly, because the field of cosmetology is more people oriented, cosmetology instructors emphasized the Cooperative/Helpful cluster. Not only did there seem to be a relationship between the occupational area of the instructor and the specific work values and attitudes taught, but, as the next section suggests, there also seems to be a relationship between the occupational area of the instructor and the pedagogical

strategies that were used. However, no evidence emerged that any of the work values and attitudes instruction was critical of the behaviors values and attitudes demanded by the respective occupational areas and thus was liberatory in nature.

The Extent to Which Emancipatory or Indoctrinational Pedagogical Strategies Were Used to Teach Work Values and Attitudes

Data collected from the interviews suggested that these trade and industrial instructors often used several different pedagogical strategies to teach a given work value or attitude. Nevertheless, upon examination of the pedagogical strategies most frequently identified and discussed by instructors (see Table 2), it appeared that very few emancipatory pedagogical strategies were used to teach work values and attitudes. For critical theorists, an emancipatory pedagogy aims to transform society and the organization of work within it to reflect participative, democratic values (Simon et al., 1991). Generally, the respondents were not interested in making society or workplaces more participatory or democratic; rather they were interested in providing students with the necessary attitudes, knowledge and skills so that, upon graduation, they could be successful in the world of work. However, though the pedagogical strategies were less than emancipatory, they were not totally indoctrinational as Bowles and Gintis (1976) suggested. The findings suggest that emancipatory and indoctrinational pedagogical strategies should be perceived as being on a continuum rather than being dichotomous.

Insert Table 2 about here

Hurn (1987) argued that most schools informally employ a hidden curriculum in an attempt to teach a work ethic. Though Bowles and Gintis (1976) and Anyon (1980) stated that the hidden curriculum is prevalent in schools, they also argued that much of the schools' work values instruction is not hidden. The instructors' behaviors in this study supported Bowles and Gintis and Anyon's assertion. They were most open about what work values and attitudes they taught and how they taught them. For instance, many of the instructors used a grading system that rewarded students for such things as attendance, punctuality, time on task, following directions, and cooperativeness. Though the literature recognizes reward structure as an indoctrinational pedagogy, the respondents were convinced that it was necessary, effective, and fair. In fact, several of the respondents stated that they sent an information sheet explaining their grading system to students' parents at the beginning of the school year so as to clearly communicate their evaluation system. Ninety-four percent of the instructors reported using a reward structure, and none of them attempted to hide this practice. On the contrary, the instructors informed students and their parents of their evaluation system.

The reward structures then that instructors employed were similar but less severe than reward structures employed in the world of work. Most were in the form of relatively specified

evaluation procedures. One cosmetology instructor explained her reward structure.

> " One half of the students' grade is based on their performance in the lab. I use a form that considers how clean and orderly the student and her work station were, the quality of the student's work, and how pleasant and cooperative the student was. I also have customers of the students fill out these forms, and I include customers' evaluations as part of the students' grade. "

Though a reward structure implemented in an evaluation system was the most frequently reported pedagogical strategy, the instructors described different types of reward structures. One welding instructor said:

> " Our program does a fair amount of work for the public. Usually I get a VICA donation for the work. That money enables me to buy pizza every nine weeks for students who have worked hard and don't have any tardies or absences."

Many instructors stated that they did use punishment, but only as a last resort. As one masonry instructor explained:

> "The carrot is far more effective with teenagers than the stick. I provide rewards for students who are conscientious. These students get higher shop grades, and I work harder to help find them jobs. Of course there are times when I do have to use the stick, but only after the other strategies have failed."

Another pedagogical strategy that the literature has identified as indoctrinational and that the instructors stated they used extensively was role modeling (Atkinson, 1965; Wilson, 1964). The respondents consistently made the point that regardless of how much they preached or lectured positive work values and attitudes, students always observed them to see if they practiced what they "preached" (i. e. , taught). The instructors believed that the behavior they exhibited was most influential on students' behaviors. In addition, the instructors argued they could not avoid serving as role models. As one building trades instructor explained:

> "My students watch me so closely that they notice if I shaved in the evening instead of that morning. I once used a dull chisel for a screwdriver. The students never let me live that down. But , I admit my mistakes. I let the students know that everyone makes them, but that not everyone learns from them."

Reward structure and role modeling were the only two indoctrinational pedagogical strategies used frequently by instructors. Though instructors repeatedly suggested that they had no ethical problem with using these two indoctrinational pedagogical strategies because they proved effective, they also maintained that other indoctrinational pedagogical strategies, such as lecture and rote learning, were totally ineffective. Similarly, while the instructors expressed no philosophical rationale for employing group discussion, role playing, and team building, they consistently maintained that these democratic pedagogical strategies were most effective. One masonry instructor explained:

> "I was a union foreman for several years. I think because of this experience, I was pretty authoritarian with the students when I first started teaching. I did a lot of lecturing and yelling at students and never really listened to what they had to say. That kind of behavior only makes things worse. I still demand a lot from students, but now I allow more student input and am a lot more positive. I have become a teacher instead of a foreman."

Group discussion and one-on-one counseling were reported almost as frequently as reward structure (see Table 2). However, unlike reward structure, these pedagogical strategies were not frequently planned. When instructors used group discussion or one-on-one counseling, they usually referred to an incident that initiated their use. For example, one printing instructor said:

> "We run a great deal of production in this program. One day a group of students ran 500 cards, and they were all wrong. I stopped the presses and had the entire class to analyze what went wrong and where it went wrong. In the discussion students made the point that the customer would be happier with fewer correct cards than with more incorrect ones."

Though respondents indicated that incidents, such as the one described above, served as the impetus for an impromptu group discussion, many also indicated that they routinely used group discussions on Mondays or Fridays to reflect upon what had transpired during the week. Building trades instructors and cosmetology instructors, in particular, seemed to engage in this practice to assist students in gaining insight into what went well

and what went wrong. From discussions about the week's activities, the instructors often found that they themselves failed in clearly communicating an expectation or procedure to a group of students. In addition, the cosmetology instructors stated that these group discussions were a time that students felt free to discuss difficulties or frustrations they experienced with a customer.

A dominant theme that surfaced from the interviews was that trade and industrial instructors attempt to have their programs simulate industry as closely as possible. Consequently, instructors attempted to teach work values and attitudes in a context similar to what students would experience in the world of work. Over one third of the instructors reported using role playing with group discussion to analyze a particular type of situation. One cosmetology instructor gave this example.

> "There are times in the week that our cosmetology program is open to the public. One customer was quite rude to one of my students. The customer had very thin hair and did not have realistic expectations of what a permanent could do to improve her appearance. The customer voiced her dissatisfaction with the permanent to the student. This really upset the student, and the girl left the lab in tears. The next day I had two students role play this incident. I had them do it a few times until I thought they really duplicated what had transpired the previous day. I then had the class brainstorm different ways a hair stylist could handle such a customer. At first the students did not take the task seriously because they said things like 'I would pull her hair out.' However, after

some time, the class did get serious, and we reached a consensus on what a hair stylist should do in such a situation."

Instructors also frequently mentioned role playing as a pedagogical strategy they used to teach Cooperation/Helpful.

"When group members are not cooperative with one another, I have them role play the situation in front of the class. I have them do this so that one student can get into another student's shoes."

Many of the instructors believed that team building helped to teach Cooperation/Helpful. The instructors pointed out that they were training students for positions which utilized team work and that the students needed to be familiar with this approach. One building trades instructor said:

"In construction most of the work is done by teams or crews. Because of this practice and the nature of the work this program does, I often assign students to work three or four in a group. "

One-on-one counseling was reported by 90% of the respondents as a pedagogical strategy that they frequently used. Through the behavioral event interview, instructors described numerous incidents in which they assumed the roles of counselor, coach, and even parent. A theme that emerged was that students often feel more comfortable talking with their vocational instructors than their parent(s) or counselor. The instructors explained that because their classes last about two and one half hours and because they usually have 20 students or less in a class, they are able to get to know each student quite well. Some of the instructors also pointed

out that a significant number of their students have home environments that are less than desirable. As a result, the instructors believed that the students looked to them for help in fulfilling some needs that were not being fulfilled at home.

Though the literature identified one-on-one counseling as a democratic pedagogical strategy, it became evident that teachers are sometimes quite directive in their counseling sessions with students. Consequently, this study supported McGuire's (1985) assertion that democratic techniques can be employed in an indoctrinational manner and indoctrinational techniques can be employed in a democratic manner. Not only did several instructors describe one-on-one counseling sessions and group discussions in which they were quite directive, but they also referred to using reward structures that incorporated student input. While the existence of this phenomena may be perceived as a limitation of the coding scheme employed by this study, the discovery of this data should be recognized as an advantage to using a qualitative rather than a quantitative approach.

Conclusion

The results of the investigation indicated that successful secondary trade and industrial instructors taught work values and attitudes that are recognized in the vocational education literature and by employers as being most important. While most advisory committee members, business leaders, and administrators would probably perceive this emphasis as "good," reproductionists would argue that the emphasized work values and attitudes are the ones

most appropriate for employees who work in a pyramidal manufacturing organization as compared to a democratically structured organization.

While the findings of this study do not completely support the reproductionists' position that vocational education instructors teach only those work values and attitudes appropriate for "shop floor" workers (e. g. , obedience, punctuality), the findings do suggest that vocational education instructors perceive their role to be a contributor to rather than a transformer of the existing social order. This is not to imply that the instructors were only concerned about contributing to the industrial economy; on the contrary they took great pride in relating stories about past students who have become financial successes. Respondents either overlooked, or did not consider it appropriate to question, taken-for-granted dominant modes of thought. Instead of engaging students in debate or an examination of alternative conceptions of work for the occupation under study, these instructors taught technical skills or the knowledge of how to get a job and keep one. Critical theorists find this behavior problematic; they believe that education should assist in the struggle to make the working lives of graduates more meaningful and emancipatory.

The findings of this study also do not fully support Bowles and Gintis (1976) contention that vocational educators use primarily indoctrinational strategies to teach work values and attitudes. While reward structure and role modeling were used extensively, more democratic strategies, such as group discussion, one-on-one counseling, and role playing, were also frequently employed.

Nevertheless, it must be recognized that more democratic pedagogical strategies are not necessarily emancipatory. Though democratic pedagogy is superior to indoctrinational pedagogy because it employs student participation, has a motivational capacity, and incorporates a more humane approach, it does not necessarily question existing organizational structures. And this characteristic, critical theorists argue, is essential for a pedagogical strategy if it is to be considered emancipatory.

Implications for Vocational Education

There are two reasons for vocational education programs to use critical pedagogy; one is pragmatic, and the other is philosophical. The pragmatic reason is that employing critical pedagogy in vocational education can serve as an impetus for future employers and employees to rethink the organizational structure of the work environment. The literature has provided evidence that work organizations that employ democratic processes or participatory management also increase worker productivity (Hall, 1987; Jain, 1980; Peterson, 1991; Zuboff, 1983). A recent report, America's Choice: high skills or low wages! (National Center on Education and the Economy's Commission on the Skills of the American Workforce, 1990) suggested that, while there is a trend toward companies implementing more participatory management, vocational education needs to teach democratic skills and utilize primarily emancipatory strategies so that future workers will be prepared to participate in, and assist in transforming companies into, high performance work organizations. Critical pedagogy can

help vocational education programs to accomplish this because it would enable students to act upon their own experiences so as to gain a greater understanding of what factors shape the working world and how such factors can be altered so as to make the world of work more democratic. The report suggested that work places must become more participatory if in the future the United States is remain a competitor in the global labor force.

The philosophical reason for vocational education programs employing critical pedagogy is more profound than the pragmatic reason for it directs action towards the creation of a more just and equitable society, rather than a more productive workforce. Vocational educators who practice critical pedagogy would promote social justice through raising students' consciousness about values, attitudes, and worker-management responsibilities (Rehm, 1989). By critically examining practices associated with various occupational groups, students would begin to reflect on their own values, attitudes, and practices. With this knowledge and understanding, students can then join in the struggle of creating a truly democratic society.

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Table 1

Work Values and Attitudes Secondary Trade and Industrial Instructors Identified as Teaching to their Students

n=50 Work Value or Attitude	Source for Identification: List %	BEI* %	Both %	Total %
Dependable/Punctual	68	4	16	88
Dedicated/Honest/Conscientious	32	20	34	86
Ambitious	20	26	36	82
Cooperative/Helpful	38	4	24	66
Neat/Orderly/Appearance	58	0	6	64
Accurate/Quality of Work	46	4	8	58
Independent/Initiative	34	8	12	54
Follow Directions/Responsive	34	6	8	48
Careful/Safe	46	2	0	48
Considerate/Courteous	26	4	10	40
Pleasant/Positive	20	6	10	36
Efficient/Quantity of Work	26	0	6	32
Persevering/Tolerant	16	8	0	24
Emotionally stable	14	6	2	22
Citizenship	20	0	0	20
Adaptable/Resourceful	12	0	0	12

Note. The above percentages reflect the percentage of instructors that reported a given value or attitude. For example, 82% of the instructors identified "ambitious" as a work value or attitude they taught. Each subject might have identified or referred to "ambitious" several times.

*Behavioral Event Interview

Table 2

Pedagogical Techniques Trade and Industrial Instructors Identified as Frequently Using to Teach Work Values and Attitudes

n=50 Instructors Pedagogical Strategy	Frequency	Percent
More Democratic		
Group discussion	45	90
One-on-one counseling	45	90
Role playing	34	68
Team building	11	22
Problem solving	9	18
Individualized instruction	8	16
More Indoctrinational		
Reward structure	47	94
Role modeling	43	86
Guest Speakers	15	30
Lecture	6	12
Rote learning	1	2